

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A disc caddy presentation apparatus comprising:
~~a frame supporting an in feed conveyor advancing a disc caddy confining a disc;~~
~~a caddy escapement supported by the frame comprising an active clamp bar~~
~~confining the disc caddy adjacent said conveyor, and a mechanism securing~~
~~the disc caddy from said conveyor; and~~
~~a caddy feed comprising a feed elevator supported by the frame and a caddy gripper~~
~~attached to the feed elevator, the caddy gripper gripping the disc caddy from~~
~~the mechanism, and wherein the caddy gripper secures and aligns the disc~~
~~caddy in a predetermined orientation, and further in which the feed elevator~~
~~advances the disc caddy secured by the caddy gripper, thereby presenting the~~
~~disc at a predetermined substantially fixed location~~

a pivot block;

a slide having a linearly stationary proximal end fixed in rotation with the pivot
block and a linearly extensible distal end;

a gripping block attached to the distal end of the slide and thereby pivotable by the
pivot block and linearly moveable by the slide; and

a gripping member supported by the gripping block and capable of a gripping mode
fixing the disc caddy to the gripping block.

2. (Currently amended) The apparatus of claim 1, ~~in which the frame further~~
~~supports an alignment assembly comprising[[:]]~~

~~a main mount with a first main shaft aperture confined by the frame;~~

~~a compression spring with a second main shaft aperture adjacent the main mount;~~

~~a feed mount plate with an attached main shaft support adjacent the compression~~
~~spring;~~

~~a main shaft extending through the main shaft support, each of the said main shaft apertures and adjustably secured to the main mount;~~
~~a side adjustment nut slidingly engaging the main shaft and pressingly engaging the feed mount plate; and~~
~~a shaft support adjacent the side adjustment nut and secured to the main shaft,~~
~~wherein the side adjustment nut selectively positions the feed mount plate relative to the frame in a first lateral direction over a spring range of the compression spring, the compression spring restrains rotation of the feed mount plate about the main shaft, and an interaction between the side adjustment nut and the compression spring selectively determines the first lateral direction of the feed mount plate relative to the frame~~
a disc caddy locating assembly supported by the gripping block.

3. (Currently amended) The apparatus of claim 2,~~the alignment assembly further comprising:~~

~~a stabilizer bar secured to the feed mount plate;~~
~~an adjuster block affixed to the stabilizer bar;~~
~~a slide assembly secured to the feed mount plate;~~
~~a feeder mount table attached to the slide assembly; and~~
~~a table lock affixed to the slide assembly and adjustably secured to the feed mount plate, the slide assembly selectively positions the feeder mount table relative to the feed mount plate in a second lateral direction different than the first lateral direction relative to the frame, wherein the table lock secures the feed mount table in a determined position relative to the feed mount plate, and wherein the adjuster block communicating with the feed mount table provides pitch adjustment of the feed mount table relative to the frame~~
wherein the locating assembly comprises a bar that is moveable to abuttingly engage against the disc caddy.

4. (Currently amended) The apparatus of claim 1,~~the caddy escapement further comprising:~~

~~an escapement mount plate attached to the frame;~~
~~a caddy present sensor supported by the escapement plate detecting presence of the~~
~~disc caddy;~~
~~a pneumatically operated slide assembly responsive to the caddy present sensor~~
~~positioning the active clamp bar in pressing contact with the disc caddy; and~~
~~a barcode reader attached to the escapement plate determining a disc type of the disc~~
3 wherein the locating assembly comprises opposing bars that are moveable
to abuttingly engage opposing sides of the disc caddy.

5. (Currently amended) The apparatus of claim 1, ~~in which the mechanism is a~~
~~caddy vacuum attachment comprising:~~

~~a guided cylinder affixed to an escapement mount plate, the escapement mount plate~~
~~attached to the frame while supporting a caddy present sensor;~~
~~a caddy vacuum grasp mounting plate attached to the guided cylinder;~~
~~a vacuum grasp support plate secured to the caddy vacuum grasp mounting plate;~~
~~a disc retention mechanism mounted to the vacuum grasp support plate;~~
~~a vacuum grasp assembly mounted to the vacuum grasp support plate; and~~
~~a disc scanner attached to the caddy vacuum grasp mounting plate detecting~~
~~presence of the disc caddy, wherein the guided cylinder responding to the~~
~~caddy present sensor positions the vacuum grasp assembly adjacent the disc~~
~~caddy, the vacuum grasp assembly grasping the disc caddy~~
4 further
comprising a linkage connecting the bars to a common actuator so that the
bars move in unison.

6. (Currently amended) The apparatus of claim 5, ~~in which the disc retention~~
~~mechanism comprises:~~

~~a disc retainer side mount attached to the vacuum grasp support plate;~~
~~a disc retainer slide attached to the disc retainer side mount;~~
~~a disc retention bar mount secured to the disc retention slide; and~~
~~a disc retention bar affixed to the disc retention bar mount, wherein the disc retainer~~
~~slide positions the disc retention bar adjacent the disc~~
wherein the disc caddy

has a bottom surface defining an opening, and wherein the bars are moveable to a retracted position whereat they are receivingly engageable inside the disc caddy bottom end opening, and wherein the bars are subsequently moveable to an extended position whereat they abuttingly engage against the disc caddy bottom surface inside the opening.

7. (Currently amended) The apparatus of claim 5, ~~in which the vacuum grasp assembly comprises:~~

~~a slide rail fastened to the caddy vacuum grasp mounting plate;
a vacuum cup mount plate fixed to the slide rail;
a vacuum cup adapted to the vacuum cup mount plate; and
a caddy bottom support joined to the vacuum cup mount plate, wherein the slide rail pressingly engages the vacuum cup into mating contact with a side of the disc caddy while sliding the caddy bottom support into supporting contact with a bottom of the disc caddy, and wherein the vacuum cup grasps the side of the disc caddy while the caddy bottom support supports the bottom of the disc caddy wherein the gripping member has opposing jaws with one of the opposing jaws disposed for being receivingly engageable inside the disc caddy opening.~~

8. (Currently amended) The apparatus of claim 1, ~~wherein upon the caddy escapement positioning the disc caddy adjacent the caddy gripper, the caddy gripper grips the disc caddy from the mechanism, and in which the caddy gripper comprises:~~

~~a slide mount supported by the caddy elevator;
a gripper slide assembly attached to the slide mount;
a gripper plate secured to the gripper slide assembly;
an active jaw assembly fastened to the gripper plate; and
a caddy locating assembly supported by the gripper plate, wherein upon positioning of the caddy adjacent the caddy gripper, the gripper slide assembly advancing the gripper plate into mating contact with the disc caddy, the caddy locating assembly aligning the disc caddy relative to the gripper plate,~~

~~and the active jaw assembly engaging a first side of the disc caddy thereby gripping the disc caddy adjacent the gripper plate 7 wherein one of the jaws is fixed.~~

9. The apparatus of claim 8, ~~in which the gripper slide assembly comprises:~~
~~an arm pivot block attached to the slide mount;~~
~~a pivot cylinder affixed to the arm pivot block;~~
~~a pivot pin communicating with the arm pivot block and responsive to the pivot cylinder; and~~
~~a gripper slide supported by the pivot pin and attached to the gripper plate, wherein upon the jaw assembly gripping the disc caddy, the gripper slide retracts the disc caddy from the caddy escapement, and the pivot cylinder rotates the pivot block thereby aligning the disc caddy for presentation of the disc wherein the other jaw is moved by an extensible slide.~~

10. (Currently amended) The apparatus of claim 8, ~~in which the active jaw assembly comprises:~~
~~a first jaw portion affixed to the gripper plate;~~
~~a jaw slide attached to the gripper plate; and~~
~~a second jaw portion secured to the jaw slide, wherein upon advancement of the gripper plate into mating contact with the disc caddy, the jaw slide advances the second jaw portion into an active clamping engagement with the first side of the disc caddy thereby gripping the disc caddy between the first and second jaw portions and adjacent the gripper plate 5 wherein the linkage is moved by an extensible cylinder.~~

11. (Currently amended) The apparatus of claim 8, ~~in which the caddy locating assembly comprises:~~
~~a datum slide assembly attached to the gripper plate;~~
~~a datum actuator plate secured to the datum slide assembly;~~
~~an activation linkage communicating with the datum actuator plate;~~

a datum bar movably affixed to the activation linkage;
a datum cylinder mounted to the gripper plate and affixed to the datum actuator plate; and
an optical sensor mounted to the gripper plate detecting a position of the datum bar, wherein upon advancement of the gripper plate into mating contact with the disc caddy, the datum cylinder advances the datum actuator plate which interacts with the activation linkage thereby advancing the datum bar into engagement with a second side of the disc caddy thereby aligning the disc caddy relative to the gripper plate, wherein the optical sensor determines compliance of the datum bar relative to the disc caddy 1 wherein the pivot block is moved by an extensible cylinder.

12. (Currently amended) The apparatus of claim 8, in which the caddy gripper further comprises:

an over travel vane attached to the gripper plate;
a sensor mount secured to the gripper slide;
an over travel slide affixed between the gripper plate and secured to the gripper slide; and
an over travel sensor mounted to the sensor mount, wherein upon encountering an encumbered travel of the disc caddy during indexing of the disc caddy by the feed elevator, the over travel vane activates the over travel sensor, the over travel sensor signals the feed elevator, and the feed elevator suspends indexing of the disc caddy 1 further comprising a travel sensor mounted to the gripping block.

13. (Currently amended) The apparatus of claim 6 further comprising an out feed infeed conveyer supported by the frame, the out feed conveyer communicating with the caddy gripper transferring the disc caddy from the caddy feed disposing the disc caddy opening in a non-vertical plane adjacent the gripping block.

14. – 18. (Canceled)

19. (Currently amended) A method comprising:

~~positioning~~ tilting a disc caddy confining a disc ~~on an in-feed conveyor to a first~~
angular orientation to counter gravity otherwise acting to displace the disc
from the caddy;

~~securing the disc caddy with a caddy escapement;~~

~~transferring the disc caddy secured by the caddy escapement to a caddy feed;~~

~~extracting the disc caddy from the caddy escapement with means for gripping a disc~~
~~caddy;~~

~~indexing the disc to a predetermined substantially fixed location; and~~

~~transferring the disc caddy to an out feed conveyor~~

tilting a gripping block to achieve a parallel relationship with the disc caddy;

moving the gripping block linearly to abuttingly engage the disc caddy;

gripping the disc caddy with the gripping block; and

pivoting the gripping block to tilt the disc caddy to a second angular orientation
different than the first angular orientation to present the disc caddy to a
picking operation to remove the disc from the disc caddy.

20. (Currently amended) The method of claim 19, ~~in which the means for gripping~~
~~a disc caddy comprises:~~

~~a slide mount;~~

~~a gripper slide assembly attached to the slide mount;~~

~~a gripper plate secured to the gripper slide assembly;~~

~~an active jaw assembly fastened to the gripper plate; and~~

~~a caddy locating assembly supported by the gripper plate comprising:~~

~~a datum slide assembly attached to the gripper plate;~~

~~a datum actuator plate secured to the datum slide assembly;~~

~~an activation linkage communicating with the datum actuator plate;~~

~~a datum bar movably mounted to the activation linkage;~~

~~a datum cylinder affixed between the gripper plate and the datum actuator plate; and~~
~~an optical sensor mounted to the gripper plate detecting a position of the datum bar, wherein the gripper slide assembly advances the gripper plate into mating contact with the disc caddy, the caddy locating assembly aligning the disc caddy relative to the gripper plate, and the active jaw assembly engaging a first side of the disc caddy thereby gripping the disc caddy adjacent the gripper plate, and wherein upon advancement of the gripper plate into mating contact with the disc caddy, the datum cylinder advances the datum actuator plate which interacts with the activation linkage thereby advancing the datum bar into engagement with a second side of the disc caddy thereby aligning the disc caddy relative to the gripper plate, wherein the optical sensor determines compliance of the datum bar relative to the disc caddy further comprising locating the disc caddy in relation to a datum after the moving step.~~

21. (Currently amended) An apparatus presenting a disc confined by a disc caddy comprising a caddy vacuum attachment securing the disc caddy, and means for presenting the disc caddy at a predetermined substantially fixed location.

22. (Canceled)

23. (New) The method of claim 19 wherein the gripping step is characterized by closing opposing jaws against the disc caddy.

24. (New) The method of claim 23 wherein the gripping step is characterized by at least one active jaw.

25. (New) The method of claim 20 wherein the locating step is characterized by moving a datum surface against the disc caddy.

26. (New) The method of claim 20 wherein the locating step is characterized by moving opposing datum surfaces against the disc caddy.

27. (New) The method of claim 19 wherein the tilting step is characterized by moving the disc caddy from a first position to a second position adjacent the gripping block while at the first angular orientation prior to the moving step.

28. (New) An apparatus for handling an open sided container containing a work piece while removing the work piece from the open side in a substantially horizontal direction, comprising:

a transport device that moves the container to a picking operation with the open side tilted to counter gravitational force otherwise urging the work piece out of the container; and
means for presenting the container to the picking operation for removing the work piece in the substantially horizontal direction.